TARGETS 5F & 5G

Name_____Date_____

Is it possible to construct a triangle with the given side lengths? If not, *explain* why not.

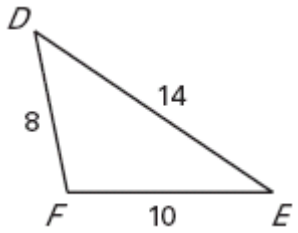
1. 3, 4, 5
2. 1, 4, 6
3. 17, 17, 33
4. 22, 26, 65
5. 6, 43, 39
6. 7, 54, 45

Find the range of possible lengths of the third side of the triangle given the lengths of the other two sides. Express your answer as an inequality.

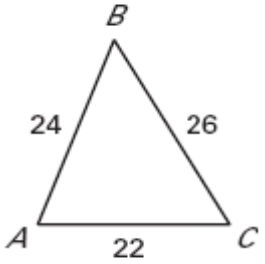
7. 6 in., 9 in.
8. 4 ft, 12 ft
9. 9 m, 18 m
10. 21 yd, 16 yd
11. 22 in., 2 in.
12. 24 in., 12 in.

List the sides and the angles in order from least to greatest.

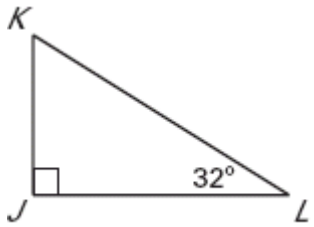
13.



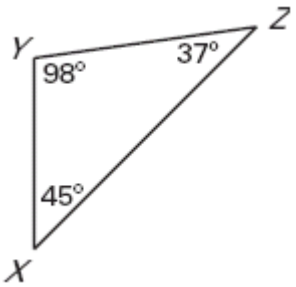
14.



15.



16.



TARGETS 5F & 5G ANSWERS

1. yes
2. no, 1 + 4 is not greater than 6
3. yes
4. no, 22 + 26 is not greater than 65
5. yes
6. no, 7 + 45 is not greater than 54
7. 3<x<15
8. 8<x<16
9. 9<x<27
10. 5<x<37
11. 20<x<24
12. 12<x<36
13. $\overline{DF}, \overline{FE}, \overline{DE}$; $\angle E, \angle D, \angle F$
14. $\overline{AC}, \overline{BA}, \overline{BC}$; $\angle B, \angle C, \angle A$
15. $\overline{JK}, \overline{JL}, \overline{KL}$; $\angle L, \angle K, \angle J$
16. $\overline{YX}, \overline{YZ}, \overline{XZ}$; $\angle Z, \angle X, \angle Y$